USER MANUAL

PEN-01 ADAPTER

TO PENDRIVE

Plik: 2015-03-30-PEN-01 PEN_45 GB

1. General description

Adapter enables to save data send from measurement device (for example from scale) to USB memory pendrive. Data is saved in a file, which can be readout after disconnecting the pendrive and connecting it to computer. To readout file any text editor can be used. Copying file can be done by typical computer programs or Windows tools.

- one-way communication with any device equipped with RS232C connection
- possibility of saving a timestamp of incoming data
- possibility to connect pendrive with any capacity using USB connection
- supply from RS232C interface or from external feeder

2. Set

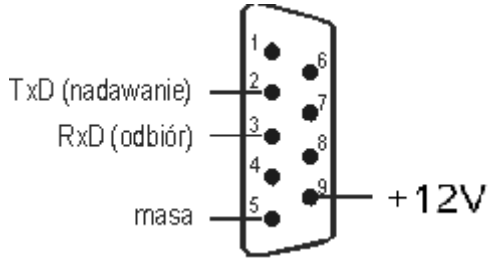
Basic kit includes:

1. Adapter PEN-01 to pendrive
2. External fedder (if necessary)
3. Pendrive
4. Manual
5. Cable WP-1 (option)

3. Technical specification

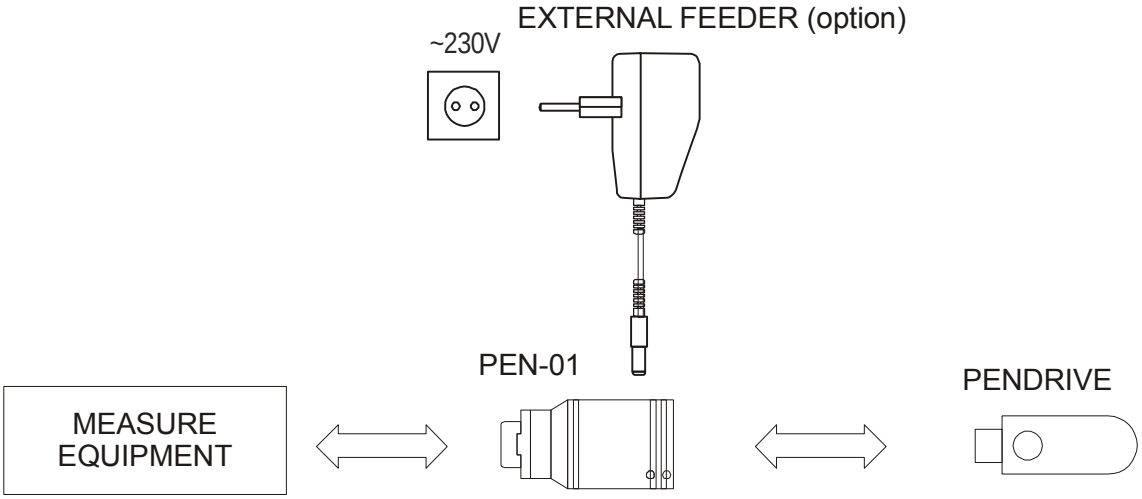
Type	PEN-01
Interfaces	RS232C (DB-9), USB (type A)
Signaling	- USB control diode (continuous lighting – ready to write, blink – during transmission) - RS232 control diode (continuous lighting – power supply, blink – during transmission)
File system	FAT12 / FAT16 / FAT32
Supply	12 VDC 100mA (using RS232C or external feeder)
Dimensions	72x41x24mm
Weight	40g

RS232C interface diagram (PEN-01)

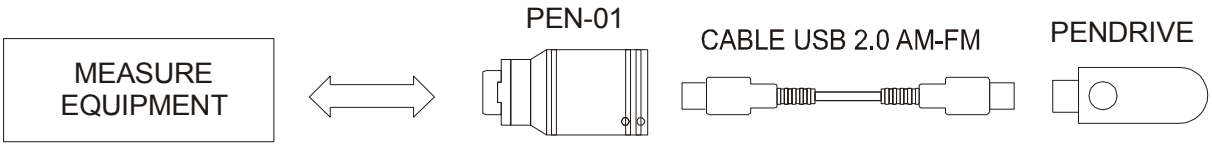


4. Options of connecting adapter to measurement equipment and pendrive

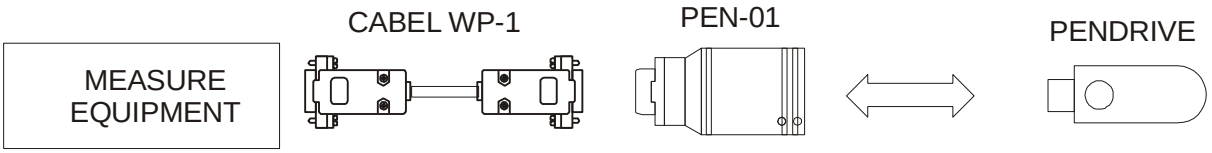
Standard option (with external feeder)



Option with USB extension conduit (supply by RS232C bond)



Option with RS232C extension conduit (supply by RS232C interface)



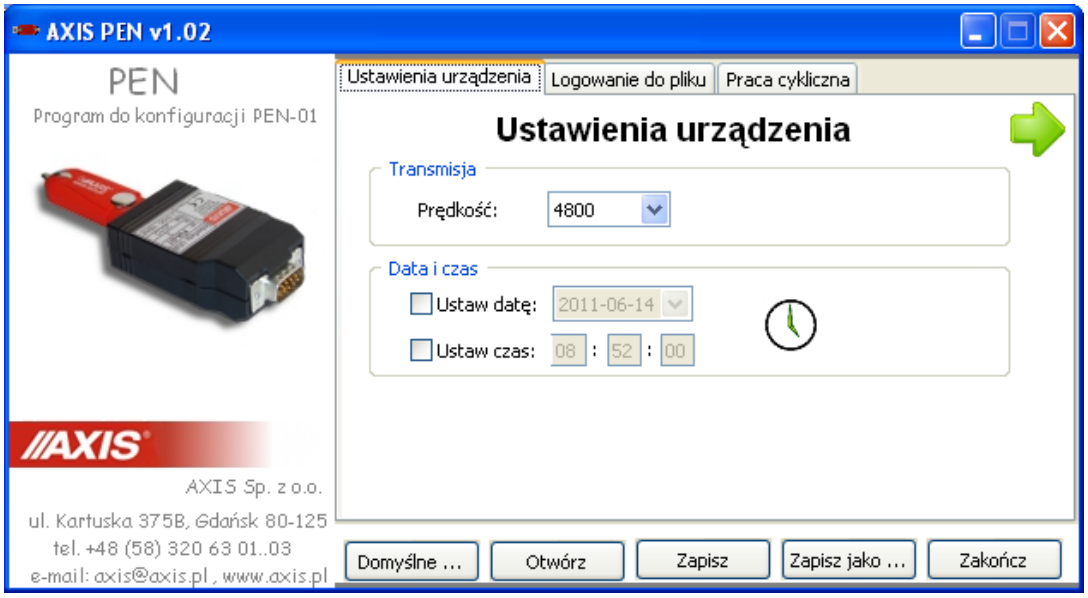
5. Adapter configuration

After connecting pendrive to adapter, adapter tries to open „config.txt" file and readouts configuration parameters. If there isn't configuration file in the pendrive main catalog, it will be created and it will set default parameters. To change the parameters, user should edit „config.txt" file using computer and a text editor.

5.1 Configuration by using PEN software

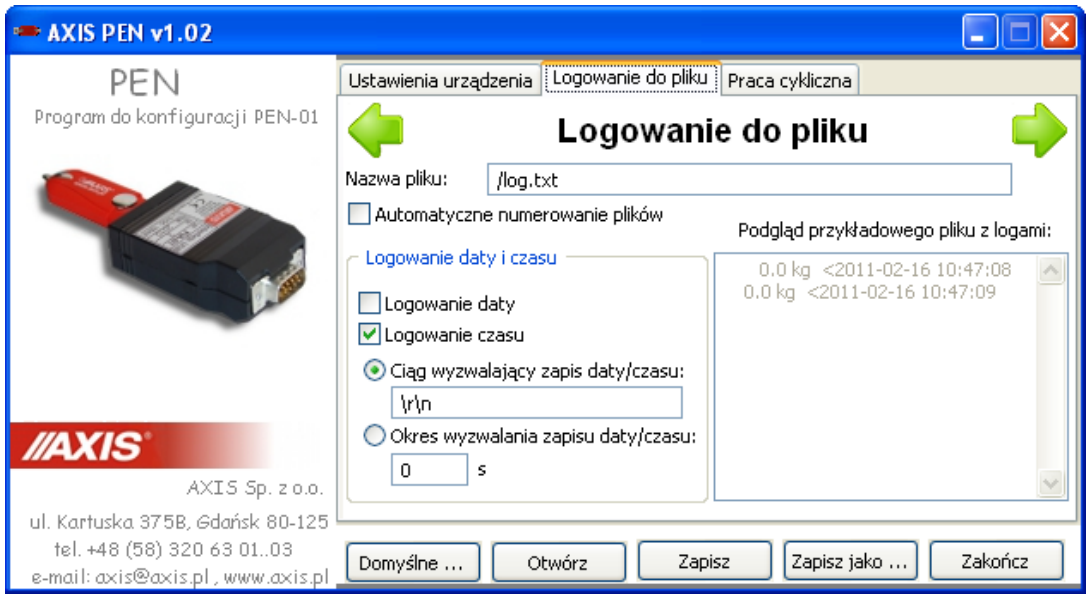
User can create "config.txt" file by using PEN. The software creates file automatically. Program PEN is located on a CD or is available on company website www.axis.pl.

Main window appears after installation of program:

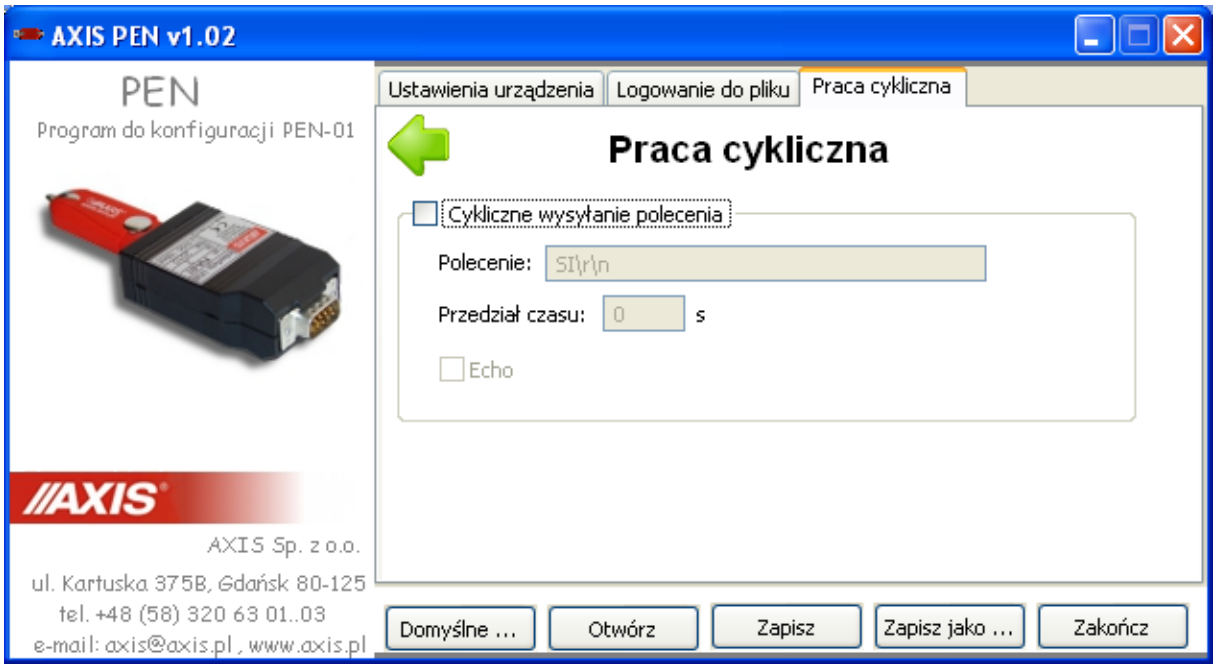


User can choose option by proceed a proper check box.

In bookmark *Logowanie do pliku* button *Zapisz* enables record a new config.txt file to connected pendrive. Choosing optons are displayed in text field on the right side of screen.



Bookmark *Praca cykliczna* enables recurrent record of indication on pendrive.



5.2 Configuration by edition of file (only for advanced users)

Manual editing of configuration file enables to change all necessary parameters. Each line of a configuration file should be written in a following way: „PARAMETER_NAME = VALUE". If particular line contains such a sequence of characters: "//" it means that everything following this sequence is a comment and won't be interpreted by PENDRIVE interface as a parameter name or value. Values of parameters can by placed directly after "=" character or can by placed in the quotation marks (if parameter contains white spaces, value of this parameter has to be put in quotation marks).

If the configuration file doesn't contain particular parameter or the value of this parameter is incorrect, then the value of the parameter will be set to default.

It is possible to use control codes in configuration file by using special escape character ('\' character). This character causes fallowing it characters to be interpreted in a different way than usual. Possible escape sequences are:

\b - Backspace; (same as \x08)
\f - FormFeed; (same as \x0c)
\n - Newline; (same as \x0a)
\r - Carriage-Return; (same as \x0d)
\t - Horizontal Tab; (same as \x09)
\x<2-hex-digits> - code of character (e.g. \x4e means 'N' character)
\X<2-hex-digits> - same as above
\\ - means '\' character
\" - means "" character
\<anything-else> - treated as if there where no '\' character

Maximum size of configuration file is 1KB.

Parameters that can be modified:

Name:	**PATH**
Description:	Path to file plus file name (8.3 format) where transmission is saved. If the file doesn't exist, it will be created. If it exists transmission will be added at the end of file. Parameter "PATH" can have following sequences: \Y – year – added two last digit of year \M – month \D – day \H – hour \N – minute \S - second
Default:	/LOG.TXT
Example:	PATH = /FOLDER1/ RESULTS.TXT

Name:	**AUTO_NAME**
Description:	Parameter can have „YES" or „NO" value. If „NO" is set, it means that after taking out the pendrive and connecting it once again, RS232 transmission will be saved to the same file defined by PATH parameter. If „YES" is set each taking out and in will create new file where the transmission will be saved. New files names will be created using file name (PATH parameter) and successive numbers for example: LOG00001.TXT, LOG00002.TXT, LOG00003.TXT etc. If the numbers run out, instead of next number, 'X' sign will show up.
Default:	NO
Example:	AUTO_NAME = YES

Name:	**BAUD**
Description:	Setting RS232 transmission speed. (Available: 2400; 4800; 9600; 14400; 19200; 38400; 56000; 57600; 115200)
Default:	4800
Example:	BAUD = 9600

Name:	**DATE**
Description:	If this parameter is present in configuration file, date will be set and this parameter will be preceded with „//" signs to avoid changing data during next pendrive inserting. Format: YYYY-MM-DD
Default:	Data doesn't change
Example:	DATE = 2010-04-11

Name:	**TIME**
Description:	If this parameter is present in configuration file, time will be set and this parameter will be preceded with „//” signs to avoid changing data during next pendrive inserting. Format: GG:MM:SS.
Default:	Time doesn’t change
Example:	TIME = 08:12:45

Name:	**COMMAND**
Description:	Command which should be sent through RS232 port at specified intervals. Maximum size of command is 20 characters. Empty command means: don’t send anything.
Default:	Empty
Example:	COMMAND = SI

Name:	**INTERVAL**
Description:	Interval at which command should be sent (expressed in seconds). If this parameter equals zero it means that command won’t be sent.
Default:	10
Example:	INTERVAL = 20

Name:	**ECHO**
Description:	This parameter determines whether command sent to RS232 port should be logged to file or not. Allowed values: YES or NO.
Default:	YES
Example:	ECHO = NO

Name:	**LOG_DATE**
Description:	This parameter determines whether transmission date should be stored and sets date format. Allowed values: YES – transmission date in PL format e.g. 2015-03-20, PL - as above, US - transmission date in USA format e.g. 03/20/2015, EU – transmission date in format e.g. 20-03-2015, NO – without transmission date.
Default:	NO
Example:	LOG_DATE = YES

Name:	**LOG_TIME**
Description:	This parameter determines whether transmission time should be stored and sets time format. Allowed values: PL – transmission time in format e.g. 14:32:58, YES – as above, EU – as above, US – transmission time in format e.g. 2:32:58pm, NO – time isn't stored.
Default:	NO
Example:	LOG_TIME = YES

Name:	**TRIG_TOKEN**
Description:	This parameter specifies sequence of characters which should make timestamp to be inserted in a log file. Maximum size of this sequence is 20 characters. Timestamp will be placed in a log file behind recognized sequence of characters. Empty "TRIG_TOKEN" means: There is no sequence of characters which should make timestamp to be inserted in a log file.
Default:	\r\n (\r – code 13; \n – code 10) (ENTER)
Example:	TRIG_TOKEN = "" (empty)

Name:	**TRIG_PERIOD**
Description:	This parameter specifies minimum period of time which has to elapse after last timestamp to cause that next data reception will make timestamp to be inserted in a log file. If, during reception of byte of data through RS232 port, PEN-01 finds that time which elapsed after last timestamp is larger than "TRIG_PERIOD" it will insert next timestamp to the log file just before this byte. If this parameter equals zero it means that elapsing time won't make timestamp to be placed in the log file.
Default:	5
Example:	TRIG_PERIOD = 10

Name:	**PROTOCOL**
Description:	This parameter term which protocol can be understandable by interface: NONE – any protocol are choose, all bytes are writing to file E1 – protocol Eltron, identifier of label will be write to file, E2 – protocol Eltron, identifier of label will not be write to file, E3 – protocol Eltron, identifier of label will not be write to file, indication will be write to file name “identifier of label.txt” (independently of PATH setting), PARAMx (x can be set from 1 to 8) – saving data to different files depending on chosen parameter. Parameter number is related to active positions in *Print* function (in balances). If second position send from scale is product identification number and user sets protocol to PARAM2 then separate measurements files will be created depending on product ID (created files will have different product ID’s as their names).
Default:	NONE
Example:	PROTOCOL = PARAM2

Configuration file example:

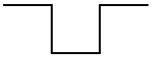
```
// *** CONFIG FILE VER. 46 ***
PATH = /LOG.TXT    // Path to log file
AUTO_NAME = NO     // Allowed values: YES;NO;

BAUD = 9600        // Allowed values: 2400;4800;9600;14400;19200;38400;56000;57600;115200;

//DATE = 2010-01-01 // Date format: YYYY-MM-DD
//TIME = 08:00:00   // Time format: HH:MM:SS

LOG_DATE = YES     // Allowed values: YES;NO;PL;EU;US;
LOG_TIME = YES     // Allowed values: YES;NO;PL;EU;US;
TRIG_TOKEN = "\r\n" // Max 20 characters
TRIG_PERIOD = 0    // 0 - 999999 [sec]

COMMAND = "SI\r\n"  // Max 20 characters
INTERVAL = 0       // 0 - 999999 [sec]
ECHO = NO          // Allowed values: YES;NO;

PROTOCOL = PARAM1   // Allowed values: NONE;E1;E2;E3;PARAM1-PARAM8;
CONFIRMATION = NO   // Allowed values: YES or NO
```

6. Signaling

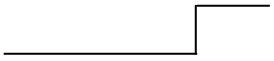
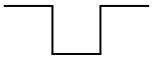
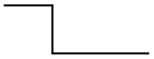
DIODA_USB – diode closer to USB interface
DIODA_RS232 – diode further from USB interface

After diode supply is on both diodes light for about 0,5 second.

DIODA_RS232

Event / State	Diode RS232
„Adapter” isn’t supplied.	Light off
„Adapter” is supplied.	Light on
Transmission is in progress on RS232 receiving line	

DIODA_USB

Event / State	Diode USB
Pendrive is disconnected or unidentified or full	Light off
Pendrive is ready	Light on
Pendrive with configuration file is connected and all parameters are recognized correctly	
Pendrive without configuration data. Configuration file has been created with default data.	
Pendrive with configuration file but one of the following problems occured: - configuration file is too big - unidentified parameter in configuration file - identified parameter has incorrect value	
Data portion saved on Pendrive	
Data portion saved on Pendrive but there is no free space available	

7. RS232C commands

The whole transmission from RS232 port is saved on Pendrive. Exception is situation when byte with 0x10 value shows up. Device recognizes this as a marker – successive bytes are interpreted as a command for the device. Device ends interpreting successive bytes as command after 0x10 sign shows up again. Following command are recognized:
l(/)– main catalog listing
o(/plik.txt) – readouts „plik.txt” file by RS232 interface
d(2010-04-11) – data setting
c(08:00:00) – time setting

Notes

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